

COMPOSTING PERMIT #SW-18/03

Effective Date: June 2, 2018
Last Modified: June 11, 2021
Expiration Date: December 2, 2021

Facility Name: Bioenergy Development Group, LLC
Mailing Address: 6751 Columbia Gateway Dr.
Suite 401
Columbia, MD 21046

Contact Person: Peter Ettinger, Chief Development Officer
Phone Number: (301) 943-4860

Alternate Contact Person: Vinnie Bevivino, Director of Organics
Phone Number: (202) 360-1805

Location of Approved Activity: 28338 Enviro Way
Seaford, DE 19973
Tax Parcel Number: 1-32-11.00-41.02

I. GENERAL CONDITIONS:

- A. In accordance with Delaware's *Regulations Governing Solid Waste* ("DRGSW"), Section 2.5.2, the Department of Natural Resources and Environmental Control ("Department") issues Composting Permit #SW-18/03 ("Permit") to Bioenergy Development Group ("BDG") for the purpose of accepting and processing hatchery waste, dissolved air flotation ("DAF") sludge and cake from wastewater treatment plants at poultry processing plants and soy bean processing plants, poultry litter, process water, and clean wood chips and successfully producing and marketing quality compost on approximately twenty-six (26) acres of Tax Parcel # 1-32-11.00-41.02 in Seaford, Delaware (see attached tax parcel map).
- B. This Permit shall be conducted in accordance with the conditions herein and with the following documents, as submitted to the Department: (1) Perdue AgriRecycle, LLC Composting Permit Application dated May 10, 2018 and associated documents; (2) Financial assurance: a Letter of Credit and Standby Trust Agreement in the amount of \$176,420 effective February 4, 2020; and (3) other

procedures and policies specifically referenced in this Permit. Conditions of this Permit shall take precedence over any of the above listed documents. Failure to comply with any condition of this Permit or any provisions within the aforementioned documents is a violation of this Permit.

- C. BDG shall, upon request, present a copy of this Permit to any law enforcement officer or representative of the Department.
- D. BDG shall notify the Compliance and Permitting Section ("CAPS") in writing within twenty-four (24) hours of any changes in the ownership, facility operators, name, or company officials of BDG.
- E. BDG shall notify the CAPS in writing at least thirty (30) days prior to the anticipated need to implement any change in waste characteristics, changes that will alter the beneficial use of the incoming waste material or the processed compost, or changes to processes, operations, or procedures described in the Application documents referenced above in section I.B., or to this Permit. BDG shall not implement said changes unless and until they have been notified in writing from the CAPS agreeing to the change(s).
- F. This Permit may be modified by the Department at any time, including additional limitations, requirements and/or special conditions. In the event the regulations governing activities authorized in this Permit are revised, this Permit may be modified.
- G. In the event that any condition of this Permit cannot be achieved or is violated, BDG shall immediately notify the CAPS and take immediate action to correct the violation.

II. **GENERAL OPERATING CONDITIONS:**

- A. **Operating hours:** Compost feedstock materials may be received at any time but must be managed in accordance with Section III of this Permit. BDG hours of operation are Monday through Sunday 6:00 a.m. to 6:00 p.m. Processing hours may occur 24 hours a day, 7 days per week. Employees in the waste receiving area and the compost processing area may work beyond the stated hours as necessary.
- B. **Security:** Access to the BDG composting facility shall be controlled to prohibit the entry of unauthorized individuals.
- C. **Access:** Representatives of DNREC may, at any reasonable time, inspect this facility to verify compliance with the requirements of this Permit, the DRGSW and 7 Del. C. Chapter 60.
- D. **Litter control:** Litter on and around the facility shall be controlled and collected daily. This includes collection, removal and proper disposal of any solid waste not approved for processing. It also includes collection and proper disposal of any incoming composting feedstock or outgoing compost product that falls along Enviro Way and Seaford Road (also known as Alternate Route 13) adjacent to the BDG site entrances. Prohibited waste, collected litter, and associated waste shall be stored in enclosed containers. Waste stored shall be removed by BDG the same day the container becomes full or within 72 hours of the Department's request to dispose of the waste (whichever comes first).

- E. Dust control: No dust shall be allowed to migrate off of the facility. Dust shall be controlled at the BDG facility by:
1. Using the biofilter for the air exhausted from the Receiving Building
 2. Spraying down the operations area with water
 3. Using the Managed Organic Recycling, Inc. ("MOR") cover in the Covered Aerated Static Pile ("CASP") area
 4. Other means as necessary
- F. Odor control: As part of the compost operator training, BDG operators shall be trained to recognize the improper odors associated with anaerobic decomposition or other improper composting techniques in the windrows and/or within stored compost piles and shall take corrective action to eliminate these odors by employing proper materials management and composting procedures. Odors resulting from the BDG facility shall not be perceived beyond the boundaries of the BDG property. Any odor complaints received shall be documented and records of the complaints shall be immediately available to the Department upon request. Odors shall be controlled at the BDG facility by:
1. Using the biofilter for the air exhausted from the Receiving Building
 2. Spraying down the CASP and windrow composting areas with water, as needed, to remove the presence of potentially odor causing materials
 3. Using the MOR cover in the CASP area
 4. Other means as necessary
- G. Vector control:
1. BDG shall monitor the facility for the presence of any rodents or other undesirable vectors daily. BDG shall document the presence of any undesirable vectors and legally eradicate them.
 2. Material in the aerated static piles must meet the requirements for Vector Attraction Reduction ("VAR"), which states aerated static piles ("ASPs") shall maintain a temperature of 104 °F (40 °C) for at least 14 consecutive days, with an average temperature of over 113 °F (45 °C). BDG shall document daily temperatures of the ASPs and shall make the temperature records immediately available upon request by the Department.
- H. Fire safety:
1. BDG shall conduct and record daily temperature monitoring for all ASPs and windrows in the composting process. If routine temperature monitoring shows a location in a windrow where temperatures are greater than 160 degrees Fahrenheit, employees shall flag the location and report it to the site manager immediately.
 2. BDG shall conduct and record weekly temperature monitoring for all windrows in the curing phase and feedstock piles provided that the conditions set forth in Section III.E.4 are met.
 3. If smoke is detected, employees shall flag the location and report it to the site manager immediately.
 4. The site manager shall act promptly to investigate all issues related to fire safety. Employees shall be trained in the proper procedures for fighting a compost fire.

5. If a fire is detected, BDG shall call 911 to request assistance from the local firefighting agency. BDG shall notify CAPS at (302) 739-9403 ext. 8 of any fire within 24 hours of detection.
 6. BDG management shall meet with the representatives from the Blades Volunteer Fire Company to ensure that their personnel are familiar with the layout of the facility, the sources of water for firefighting, and the methods of fighting a compost fire. BDG shall develop a fire management plan with the Blades Volunteer Fire Company, which shall be implemented immediately, reviewed annually, and updated as needed.
- I. Employee Health and Safety: Employees shall work under appropriate health and safety guidelines established by the Occupational Safety and Health Administration. Use of personal protective equipment shall be in accordance with 29 CFR Part 1910.132 as a minimum. First aid equipment shall be maintained and available onsite. Emergency telephone numbers of nearby ambulance, hospital, police and fire services shall be prominently displayed on-site.
- J. Smoking: No smoking shall be permitted in the receiving, processing, screening, and storage areas.
- K. Equipment Usage, Inspection, and Maintenance: A combination of processing equipment such as front-end loaders, a hammermill, screens, and a windrow turner will be used to implement this Permit. BDG shall use a combination of this equipment and manual labor to process the incoming waste material and to handle finished compost. Processing equipment shall be selected and operated in a manner to meet DNREC Air Quality (DAQ) standards and conditions of applicable DAQ permits or registrations. BDG shall maintain all necessary air permits and registrations as long as they are required, and secure any other necessary Division of Air Quality permits and registrations in the future. All operating equipment shall be operated and inspected in accordance with the manufacturer's recommendation, any required permits, and this Permit. Equipment shall be maintained and operated in a manner that protects BDG employees, the public and the environment.
- L. Training: All employees who are to work in the receiving or compost processing area will have received initial training, within 180 days of hiring, in (1) Health and safety procedures, (2) Fire prevention and protection, (3) Emergency first aid and (4) CPR. Prior to working in the composting operation, employees shall receive compost operator training including site specific training on the basics of the MOR process, biofilter operation, how to identify acceptable compost feedstock materials, how to identify and respond to prohibited waste, and how to conduct an inspection of the facility. They shall also receive equipment operation training conducted by the equipment manufacturer's representative or another person specifically knowledgeable in the operation of the equipment. Training shall include the manufacturer's operating and maintenance manual, operation instruction, equipment safety features, and hazards that might be encountered. Unless otherwise specified by a nationally recognized training provider (for example, the American Red Cross as a training provider for First Aid), training shall be required initially and annually thereafter.

M. Recordkeeping:

1. BDG shall maintain all training records on site for a period of three (3) years and the records shall be immediately provided to the Department upon request. These records shall document that required training has been provided to all employees who are to work in the waste receiving or compost processing areas.
2. BDG shall record and maintain on site all data required by this Permit for a minimum of three (3) years and the records shall be immediately provided to the Department upon request, including:
 - a. Daily, monthly, and annual tonnages for all incoming waste and materials (listed by waste/material description)
 - b. Daily, monthly, and annual tonnages for all outgoing waste and materials, including prohibited wastes and residuals (listed by waste/material description)
 - c. A list of all buyers or outlets of products
 - d. Records from all monitoring and inspections described in this Permit and in BDG's Operations Plan
 - e. Daily compost process control and monitoring information, including all temperature records
 - f. Laboratory results from all sampling described in this Permit
 - g. Odor, dust, and vector complaints received from off site

N. Sampling and Analysis:

1. All sampling of compost, for the purpose of determining if the compost meets the performance and analytical criteria in Table 1, shall be conducted in accordance with the U.S. Composting Council's *Test Methods for Evaluation of Compost and Composting* ("TMECC") and reported on a quarterly basis as described in Section II.O of this Permit.
2. Compost awaiting analytical sampling or analysis shall be stored separate from all other compost and windrows unless and until it can be shown to meet the analytical and performance criteria listed in Table 1, below.
3. In the event that compost fails to meet any of the criteria listed below for any parameter listed in Table 1, BDG shall notify the Department in writing within 72 hours of BDG's receipt of the data and provide what corrective actions shall be taken to address this failure and prevent future failures.
4. Compost that does not meet the criteria for Maturity, Stability, Soluble Salts, pH, total inerts, plastic, or carbon to nitrogen ratio shall not be marketed unless and until BDG receives written Department approval or additional management and subsequent analysis of the same batch of finished compost demonstrates it meets the criteria for those parameters.
5. A batch of finished compost product that fails to meet the criteria for Salmonella, Fecal coliform, or any metal listed in Table 1 may be resampled and analyzed once; however, BDG shall split samples with the CAPS. In

this event, BDG shall be responsible for the analytical costs of the Department's samples. If any of the samples fail to meet the criteria a second time, the compost shall be properly disposed of within 30 calendar days of BDG's receipt of the analytical data for that re-sampled batch.

6. Metals analysis shall be on a dry weight basis for arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc using EPA's SW-846 (*Test Methods for Evaluating Solid Waste, Physical/Chemical*) method 6010 in its most currently approved version. Metals in the finished compost shall not exceed the limits shown in Table 1:

TABLE 1. PERFORMANCE and ANALYTICAL CRITERIA

| PARAMETER | CRITERIA |
|------------------------------|---|
| Maturity & Stability | ≥ 6 based on Solvita® Compost Maturity Index ¹ |
| Soluble Salts (Conductivity) | ≤ 10 mmhos/cm |
| Salmonella | < 3 MPN per 4 g dry wt. |
| Fecal Coliform | < 1,000 MPN/g dry wt. |
| pH | 5 – 8.5 |
| Total Inerts | < 1 %, not to exceed 0.5% plastic |
| Carbon to Nitrogen Ratio | < 20:1 |
| Arsenic, Total | < 11 mg/kg ² |
| Cadmium, Total | < 7 mg/kg |
| Chromium VI | 0.29 mg/kg ³ |
| Chromium, Total | < 214 mg/kg |
| Copper, Total | < 1,000 mg/kg ⁴ |
| Lead, Total | < 400 mg/kg |
| Mercury, Total | < 1 mg/kg |
| Molybdenum, Total | < 39 mg/kg |
| Nickel, Total | < 150 mg/kg |
| Selenium, Total | < 39 mg/kg |
| Zinc, Total | < 2,300 mg/kg |

¹ Alternate Criteria for Maturity using TMECC method 5.05-A (Seed emergence and seedling vigor): > 80% relative to positive control; Alternate Criteria for Stability using TMECC method 5.08-B (Carbon Dioxide evolution rate): < 4 mg CO₂-C/g VS /day.

² Division policy sets the limit for Arsenic at 11 ppm (mg/kg).

³ If the limit for Chromium VI is below the routine laboratory method detection limit ("MDL"), the routine MDL becomes the limit.

⁴ Permit-specific value based on Risk Assessment Analysis

O. Reporting:

1. Quarterly: BDG shall submit the results from all analyses conducted in a given quarter to the Department via e-mail or in hard copy on a quarterly basis by the following dates: April 15th, July 15th, October 15th, and January 15th. BDG shall include in these quarterly reports tonnages and volumes of:
 - a. Wood waste, hatchery waste, poultry litter, DAF sludge, and DAF cake, and any other incoming waste received, including state of origin, listed by waste type
 - b. Finished compost produced
 - c. Finished compost shipped to, or picked up by, customers
 - d. Finished compost used at or around the facility
 - e. All waste sent for disposal, recycling, or reuse, and the date and facility where sent. An attempt to provide a general description of the waste shall also be provided, i.e. plastic, treated lumber.
 - f. Compost failing to meet performance and analytical criteria in Table 1, including the parameter(s) that was not met and the facility at which the unacceptable compost was disposed, if applicable
 - g. Rejected waste, tallied as number of loads, including reason for rejection, customer, and date it was brought to BDG
 - h. Finished compost stored
 - i. Wood waste, screened-overs, hatchery waste, poultry litter, DAF sludge, DAF cake, and any other waste stored, listed by waste type and storage location.
2. Annually:
 - a. No later than February 1 of each calendar year, BDG shall provide an updated closure cost estimate, taking into account inflation. If the cost estimate has increased over the amount of financial assurance provided, BDG shall accordingly provide increased financial assurance, along with an updated Performance Bond, within six weeks of the submission of the updated closure cost estimate.
 - b. No later than February 1 of each calendar year, BDG shall submit an annual report for the previous calendar year in hard copy format, and include the following information:
 1. Tonnages and volumes for the same materials described in Section II.O.1.a, total of each for the year and including state of origin
 2. Tonnages and volumes for the same materials described in Section II.O.1.b-g, total of each for the year.
 3. Tonnages and volumes for the same materials described in Section II.O.1 h-i, stored at the end of the year
 4. Names and addresses of all suppliers of DAF sludge, DAF cake, or hatchery waste
 5. A summary of the performance and analytical results from the quarterly finished compost testing reports, to include the

- range of results for each parameter and BDG's interpretation of those results.
6. Written discussion by BDG of the facility's operations and processes to include any adjustments made in the process as well as a summary of materials management knowledge and experience gained during the past calendar year.
 3. All reports shall be submitted to the CAPS project officer via email or a hard copy can be mailed to:

DNREC-CAPS
89 Kings Highway
Dover, DE 19901

P. Authorized Waste Types:

1. Only clean wood waste, poultry litter, DAF sludge, DAF cake, hatchery waste, and process water shall be accepted for processing into compost and these waste materials shall be managed in accordance with this Permit. Clean wood is defined as wood that is not painted, stained, coated or treated. Process water is defined by BDG as leachate collected from the CASP system, water from the stormwater pond, or other non-potable water from the composting site. Process water shall not be included in annual permitted tonnage amounts.
2. DAF sludge and DAF cake shall be accepted only from the following locations:
 - a. Perdue Farms, Inc. - 20621 Savannah Rd, Georgetown, DE
 - b. Perdue Farms, Inc. - 255 N. Rehoboth Blvd, Milford, DE
 - c. Perdue Farms, Inc. - 521 Willow Street, Salisbury, MD
 - d. Perdue Farms, Inc. - 2401 East Cumberland Street, Lebanon, PA 17042
 - e. Mountaire Farms - 29005 John J Williams Hwy., Millsboro, DE 19966
 - f. Mountaire Farms - 55 Hosier Street, Selbyville, DE 19975
 - g. Amick Farms - 274 Nealson Street, Hurlock, MD 21643
 - h. Amick Farms - 39 Delaware Ave, Hurlock, MD 21643
 - i. Allen Harim Foods - 18752 Harbeson Road, Harbeson, DE 19951
 - j. Allen Harim Foods - 29984 Pinnacle Way, Millsboro, DE 19966
 - k. Tyson Foods - 11224 Lankford Hwy., Temperanceville, VA 23442
3. Hatchery waste shall be accepted only from the following locations:
 - a. Perdue Farms, Inc. - 37 Delaware Avenue, Hurlock, MD
 - b. Perdue Farms, Inc. - 9891 Old Princess Anne Rd, Westover, MD
 - c. Perdue Farms, Inc. - 6906 Zion Church Rd, ZCR Complex Hatcheries 2 & 3, Salisbury, MD
 - d. Perdue Farms, Inc. - 2401 East Cumberland Street, Lebanon, PA 17042

- e. Mountaire Farms - 29005 John J Williams Hwy., Millsboro, DE 19966
 - f. Mountaire Farms - 55 Hosier Street, Selbyville, DE 19975
 - g. Amick Farms - 274 Nealson Street, Hurlock, MD 21643
 - h. Amick Farms - 39 Delaware Ave, Hurlock, MD 21643
 - i. Allen Harim Foods - 18752 Harbeson Road, Harbeson, DE 19951
 - j. Allen Harim Foods - 29984 Pinnacle Way, Millsboro, DE 19966
 - k. Tyson Foods - 11224 Lankford Hwy., Temperanceville, VA 23442
- 4. Wood waste material, or “overs”, from the ½ inch screen, shall be an acceptable feedstock as long as they have gone through an effective process to mechanically remove non-compostable material. Overs shall not be included in annual permitted tonnage amounts.
 - 5. No other waste shall be accepted unless and until BDG obtains approval from the Department.

Q. Prohibited Waste:

BDG shall exercise reasonable care to ascertain whether waste accepted by the facility is prohibited waste, and shall not accept the following prohibited waste, including, but not limited to:

- 1. Any plastics that are not certified compostable by the Biodegradable Plastics Institute (“BPI”) or equivalent certifying third party
- 2. Glass, metal
- 3. Painted, stained, coated, or treated wood; wood containing Chromated Copper Arsenate (“CCA”) or other chemical preservatives; wood containing creosote; and wood that is suspected of being contaminated with PCB’s, petroleum products, or hazardous chemicals
- 4. Mixed municipal solid waste (trash/garbage), tires
- 5. Batteries, electronics
- 6. Sewage sludge and septage
- 7. Infectious and medical wastes, radioactive materials, universal wastes or hazardous wastes
- 8. Hatchery waste not specifically described to, and approved by, the Department.
- 9. Waste, including DAF sludge and DAF cake, resulting from wastewater systems that contain a sanitary component are specifically prohibited.

Reasonable care shall include contacting the waste transporter or individual generator if a visual determination regarding the acceptability of the waste material cannot be made. Any loads that appear to contain any of the prohibited wastes listed above shall be rejected. These wastes shall be reloaded onto the truck and removed immediately. If these wastes are noticed after the

hauler/customer has left BDG, these wastes shall be immediately containerized and lawfully removed from the site within 72 hours of initial receipt.¹

III. RAW MATERIAL ACCEPTANCE, PROCESSING, AND STORAGE:

A. Procedures for Waste Acceptance: Waste acceptance and processing shall be conducted in accordance with BDG's submitted *Operations Plan*, DRGSW, Delaware Code, and the conditions below.

1. All incoming waste, rejected waste, outgoing waste, and outgoing products shall be weighed and recorded.
2. Upon arrival at the facility, all incoming loads of wood waste and poultry litter shall be inspected prior to, and after, unloading. Hatchery waste and DAF cake and sludge shall be inspected as it is dispensed or unloaded.
3. Any prohibited wastes listed in section II.Q of this permit that are visible shall be reloaded onto the truck and removed immediately. If these wastes are noticed after the hauler/customer has left BDG, these wastes shall be immediately containerized and lawfully removed from the site within 72 hours of initial receipt.¹
4. BDG shall accept no more than 2,500 tons of authorized waste per calendar month and shall under no circumstances accept more than 30,000 tons of authorized waste per calendar year.
5. BDG may accept any combination of authorized waste types provided that the monthly and annual limits listed above in section III.A.4 are not exceeded.
6. Procedures for Wood Waste Acceptance: BDG shall accept only clean wood waste that is not painted, treated, coated, or stained.

B. Procedures for Waste Handling:

1. DAF Sludge and Cake: DAF sludge and DAF cake shall be delivered to the BDG site in a covered, leak-proof vehicle or container. All DAF sludge shall be pumped from the vehicle to the storage tanks. DAF sludge shall be pumped from a storage tank into the Receiving Building and on top of or surrounded by absorbent, approved feedstock. DAF Cake shall be unloaded into the Receiving Building. No liquid residue from any DAF sludge or DAF cake shall leave the absorbent, approved feedstock or the Receiving Building floor. All DAF sludge or DAF cake dispensed or unloaded into the Receiving Building shall be mixed and placed in a CASP within twenty-four (24) hours of the DAF sludge or DAF cake being dispensed into the Receiving Building.
2. Hatchery Waste: Hatchery waste shall be delivered to the BDG site in a covered, leak-proof vehicle or container. Hatchery waste shall be unloaded

¹ For information on the proper handling and disposal of sewage sludge and septage, please contact the Division of Water at (302) 739-9946. For information on the proper handling and disposal of all other listed prohibited wastes, please contact the CAPS at (302) 739-9403.

- into the Receiving Building. Hatchery waste shall be unloaded on top of or surrounded by absorbent, approved feedstock. No liquid residue from the hatchery waste shall leave the absorbent, approved feedstock or the Receiving Building floor. All hatchery waste shall be mixed and placed in a CASP within twenty-four (24) hours of the hatchery waste being received.
3. Poultry Litter: Poultry litter shall be unloaded into either the Receiving Building or a bunker in the CASP area. Poultry litter shall be used as needed to achieve the optimum carbon to nitrogen ratio, moisture content and porosity of the mixture.
 4. Wood Waste: Wood waste shall be added to the compost mixture to achieve the optimum carbon to nitrogen ratio, moisture content and porosity of the mixture.
 5. Process water: Process water may be added to the compost mixture to provide additional moisture as needed. BDG shall make every effort to ensure process water does not leave the Receiving Building floor.

C. Procedures for Storage of Waste:

1. BDG shall not store any hatchery waste or DAF cake other than is allowed for initial mixing. Hatchery waste and DAF cake shall be stored only in the Receiving Building. Storage of hatchery waste and DAF cake inside the Receiving Building is limited to twenty-four (24) hours from the time the hatchery waste is received by BDG.
2. Poultry litter shall be stored either in the Receiving Building or in a bunker in the CASP area. BDG shall store no more than 300 tons of poultry litter at any one time.
3. BDG shall store no more than 173 tons of DAF sludge. All DAF sludge shall be stored in the designated DAF storage tanks.
4. BDG shall store no more than 10,000 gallons of process water. All process water shall be stored in the designated process water storage tank.
5. BDG shall at all times store a minimum of 100 tons of either clean wood waste or screened overs. Ground wood waste shall not be stored more than 12 feet in height.
6. The total amount of unprocessed waste stored in the Receiving Building shall not exceed 377 tons of material at any time. This total shall be any combination of hatchery waste, DAF cake, and poultry litter.
7. Wood waste material, or "overs", from the ½ inch screen, shall be an acceptable feedstock as long as they have gone through an effective process to mechanically remove non-compostable material.
8. The temperature of the piles of ground wood waste, including ~~wood waste~~ overs described above in section III.C.7, shall be monitored and recorded at least once a week to ensure the temperature at the core of the pile does not exceed 160 degrees Fahrenheit. If the temperature is above 160 degrees Fahrenheit, BDG shall follow the fire safety procedures outlined in Section II.H above and take action to reduce the risk of fire. Records shall indicate

the temperature measured as well as any actions taken to lower the temperature, if applicable.

9. Prohibited waste, collected litter, and associated waste shall be stored in enclosed containers. Waste stored shall be removed by BDG the same day the container becomes full or within 72 hours of the Department's request to dispose of the waste (whichever comes first).

10. Any other storage of waste not described in this Permit is prohibited.

D. Procedures for Waste in Covered Aerated Static Piles:

1. Material in the CASPs must meet the requirements for the Process to Further Reduce Pathogens ("PFRP"). As such, the piles shall maintain a temperature of 131 °F (55 °C) or higher for 3 consecutive days.
2. All aerated static piles shall be completely covered by the MOR cover such that no compost is exposed and the MOR cover shall be sufficiently weighted down so the cover does not move and the compost remains completely covered. The MOR cover shall be monitored for wear and tear and shall be repaired or replaced as necessary to perform properly.
3. No aerated static pile shall exceed 165 feet in length, 25 feet in width or 12 feet in height. No aerated static pile shall extend beyond the concrete walls separating the piles.
4. The total amount of blended material and compost in the CASP Area, Windrow Composting Area and Finished Product Storage Area, including compost awaiting sampling or analysis, shall not exceed 15,000 tons.
5. All leachate collected from the trench drain located underneath the CASPs shall flow through a sewer line to the process water storage tank.
6. Temperature monitoring for active compost being processed in CASPs shall be monitored daily until such time as it moves from the CASP to curing.

E. Procedures for Compost in the Curing Process:

1. No windrow shall exceed 165 feet in length, 25 feet in width, or 12 feet in height. Windrows shall be at least six feet apart at the base and at least 12 feet apart at the top.
2. Compost in the curing phase shall be stored in the Windrow Composting Area or in the CASP Area if necessary, to generate proper composting conditions. Compost that has been cured may be placed in the CASP area if forced aeration is needed to aid in the drying process. Any material placed in the CASP area that is not actively composting must be clearly identified and able to be distinguished from active composting CASPs.
3. The total amount of blended material and compost in the CASP Area, Windrow Composting Area and Finished Product Storage Area, including compost awaiting sampling or analysis, shall not exceed 15,000 tons.
4. Compost in the curing phase of the process must have its temperature checked daily until such time as the temperature is below 105°F. At this time, monitoring of temperature will shift to weekly. In the event a curing windrow is disturbed, such as through turning or addition of material, temperature monitoring will revert to daily for a minimum of five (5) days

with a decreasing temperature trend and measurements below 105°F have been reestablished.

5. Water may be added to the windrows for additional moisture using well water or process water. If process water is used, the windrowed material shall again meet PFRP. For windrows, the PFRP requires material to be held at 131°F (55°C) for 15 days or longer. During the period when the compost is maintained at 131°F (55°C) or higher, there shall be a minimum of five turnings of the windrow. In these cases, the temperature checks shall go back to daily to ensure that the 131°F (55°C) level is maintained.

IV. **STORAGE OF FINISHED COMPOST:**

- A. The total amount of blended material and compost in the CASP Area, Windrow Composting Area and Finished Product Storage Area, including compost awaiting sampling or analysis, shall not exceed 15,000 tons.
- B. Finished compost is defined as compost that has completed the curing phase, has been screened through a ½-inch screen (or smaller), has satisfied all performance and analytical criteria specified in Table 1 of this Permit, and is immediately available for distribution to a customer, whether paid or unpaid.
- C. Finished compost shall be stored as designated on the attached site map.

V. **FINISHED COMPOST USE AND APPLICATION:**

- A. BDG shall be responsible for ensuring all necessary permits have been obtained prior to marketing the compost.
- B. Finished compost may be used as a soil amendment.
- C. Finished compost with a Solvita Maturity Index of ≥ 6 may be used for Bedding Plants; Container media; Potting mixes; Seedling starters; Hothouse beds; Greenhouses; Orchards; Pastures; Hay crops; Turf; Topsoil Substitute Blends; and General gardening.

VI. **CLOSURE:**

- A. BDG shall immediately notify the Department in writing the estimated date of facility closure and/or the date wastes will no longer be accepted for composting.
- B. BDG shall notify the Department in writing when closure activities are started, and again when closure is complete.
- C. Should BDG cease the processing of waste into compost, within one hundred and eighty (180) days of cessation of operation, all feedstocks, waste material in the process of composting, and compost product shall be properly recycled, re-used, or disposed of off-site. All disposal, re-use, and recycling activities undertaken in this section must be conducted per the requirements of the DRGSW and Delaware Code.
- D. During the 180 day closure period, the total amount of compost stored in the CASP Area, Windrow Composting Area and Finished Product Storage Area, including

compost awaiting sampling or analysis, shall not exceed a total of 15,000 tons. By the end of the 180-day period, all compost, including compost which did not meet the analytical criteria established in Table 1 of this Permit, shall be properly removed from the site.

VII. ADDITIONAL CONDITIONS:

- A. The Department retains the right to collect samples of any material at any time. The Department and BDG retain the right to obtain split samples from each other's sampling events for separate analysis. BDG shall bear the expenses or reimburse the Department for the cost of analysis of all samples obtained and analyzed by, or for, the Department once per quarter.
- B. BDG shall obtain and maintain proper coverage under the Department's National Pollutant Discharge Elimination System ("NPDES") stormwater permit program. If the stormwater discharge associated with BDG results in an increase in nutrient load, additional best management practices shall be employed. If increased loading cannot be addressed strictly through BMP implementation, an offset plan shall be required.
- C. If BDG desires to renew this Permit, BDG shall submit a new application with all supporting documentation no later than 180 days prior to its date of expiration. BDG may be required to submit additional documentation as needed at the Department's sole discretion.
- D. This Permit does not relieve BDG from complying with any other applicable Federal, State, or Local laws, regulations or ordinances.
- E. Any violation of any condition of this Permit, regulation promulgated by the Department, Secretary's Orders, or provision of 7 *Del.C.* Chapter 60, shall justify termination of this Permit, and implementation of appropriate enforcement action.

VIII. Permit Renewal and Transfer History:

- A. December 2, 2016
 - 1. Composting Permit # SW-16/13 issued to Seaford AgriSoil, LLC
 - a. Initial composting permit
 - b. Issued for one year expiring December 2, 2017
- B. November 29, 2017
 - 1. Permit # SW-16/13 extension granted
 - a. Existing permit extended six months to June 2, 2018
 - b. Facility name updated to Purdue AgriRecycle, LLC
- C. June 1, 2018
 - 1. Permit # SW-18/03 issued to Purdue AgriRecycle, LLC
 - a. Issued for two years expiring June 2, 2020
- D. January 21, 2020
 - 1. Permit # SW-18/03 transferred to Bioenergy Development Group

E. May 26, 2020

1. Minor Modification to Permit # SW-18/03 issued


- a. Removed limitations of feedstock by type in Section III.A. Monthly and annual feedstock tonnage limits remain unchanged
- b. Changed temperature monitoring requirements in Section II.H.1 from "daily" to "weekly"
- c. Changed notification requirements from "24 hours" to "72 hours" for compost failing analytical criteria in Section II.N.3
- d. Changed C:N ratio criteria from "10:1-20:1" to "<20:1" in Table 1
- e. Removed end use restrictions associated with Solvita 6 in Table 1 and Section V.C
- f. Changed wood storage requirements from "minimum of double the volume or tonnage of wood waste required for optimum compost mixture of a single CASP" to "100 tons of either clean wood waste or recycled wood" in Section III.C.
- g. Updated Section III.D.6, III.E.4 and III.E.5 to clarify weekly temperature monitoring when conditions are met. Additionally, clarification of when monitoring must go back to daily with the addition of process water in compost in the curing phase.

2. Permit # SW-18/03 extension issued

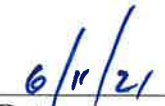
- a. Modified permit extended 18 months to December 2, 2021.

F. June 8, 2020

Updated permit to add additional locations and vendors for acceptable material to be sourced from.



Jason W. Sunde
Environmental Program Administrator
Compliance and Permitting Section



Date

TAX PARCEL MAP



